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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/825,173

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Koichi Miyachi

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9064

30593

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HARNESS, DICKEY & PIERCE, P.L.C.

P.O. BOX 8910

RESTON, VA 20195

EXAMINER

MA, CALVIN

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/825,173	<b>Applicant(s)</b> MIYACHI ET AL.	
	<b>Examiner</b> CALVIN C. MA	<b>Art Unit</b> 2629	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,60-62 and 132 is/are allowed.
- 6) ☒ Claim(s) 1,3,15,16,33,34,37,38,63-68,71-73,76,134,136 and 138-149 is/are rejected.
- 7) ☒ Claim(s) 21-24,31 and 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/23/2010</u> .   | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Disposition of Claims: Claims pending in the application are 1-3,15,16,21-24,31-34,37,38,60-68,71-73,76,132,134,136 and 138-149.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 and 16 are indefinite since they are dependent on a cancelled claim 4, and fails to particularly point out and distinctly claim the subject matter.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 33-34, 37-38, 63-67, 71-72, 76, and 139-149 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwata et al. (US PUB: 2002/0044122) in view of Wojaczynski et al. (USP 5442375).

As to claim 1, Kuwata et al. teaches a color display device (i.e. fig. 1 has color LCD panel 20 ) comprising: a color processor to determines a relationship between

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plural color components (i.e. the image data correction unit 54 and the half toning process unit 55 ) (see Fig. 1, [0092-0094]) of an input color image signal in terms of gradation levels of the plural color components of an input color image signal (i.e. the tone value correction processes the plurality of color components) (see [0093]), and to process the input color image signal by carrying out calculation based on the determined relationship for each of the plural color components excluding a components with a relatively smallest gradation level (i.e. the threshold value TH of 0 - 15 exclude the components in the color channel with the relative lowest gradation level to reduce the error component in the half tone process) (see Fig. 6-7, [0105-0107]), using variable varying depending on the relationship among the respective gradation levels of the plural color components (i.e. the system the reduces the color from 256 tones to 8 tones depend on the relationship of the RGB components relative to each other) (see Fig. 6, [0104-0105]); and a color display panel (20) to display the processed color image signal (see Fig. 1).

However Kuwata et al. does not explicitly teach wherein the gradation level of the color component with the relatively smallest gradation level remains unchanged before and after the calculation. Wojaczynski teaches wherein the gradation level of the color component with the relatively smallest gradation level remains unchanged before and after the calculation (i.e. Wojaczynski teaches the lowest levels of the gradations in the black grayscale value shifting bar as shown in the computer display control box of figure 2B, where the user is able to set such level at the same condition as before which

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means no change for the computer to adjust to, and while all the other color gray scale values are adjusted) (Fig. 2B, Col. 8, Line 1-38).

Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used the color customized adjustment design of Wojaczynski which ignores the lowest effecting gradation to the overall image processing system of Kuwata et al. since customized color display control allow the computer to display better a variety of display system such as LCD and plasma display (see Wojaczynski Col. 1, Line 60-Col. 2, Line 6).

As to claim 139, As to claim 1, Kuwata et al. teaches a color display device (i.e. fig. 1 has color LCD panel 20 ) comprising: a color processor to determines a relationship between three color components (i.e. the image data correction unit 54 and the half toning process unit 55 is configured using the RGB color for the individual pixels to form half tones ) (see Fig. 1, [0092-0094]) of an input color image signal in terms of gradation levels of the plural color components of an input color image signal (i.e. the tone value correction processes the plurality of color components) (see [0093]), processing the input color image signal by carrying out a different calculation for each input color image signal depending on which of six patterns of the determined relationship that the input color image signal belongs to, and since Kuwata et al. teaches that there are at least eight tone levels (Fig. 6, [106-107]) there exists at least eight patterns of the determined relationship that the input color image signal belongs to, where each of the tone are processed differently according to the look up table (see

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[0092-0093]), the calculation being performed for each of the three color components excluding a component with a relatively smallest gradation level (i.e. the threshold value TH of 0 - 15 exclude the components in the color channel with the relative lowest gradation level to reduce the error component in the half tone process) (see Fig. 6-7, [0105-0107]), using variable varying depending on the relationship among the respective gradation levels of the plural color components (i.e. the system that reduces the color from 256 tones to 8 tones depends on the relationship of the RGB components relative to each other) (see Fig. 6, [0104-0105]); and a color display panel (20) to display the processed color image signal (see Fig. 1).

However, Kuwata et al. does not explicitly teach wherein the gradation level of the color component with the relatively smallest gradation level remains unchanged before and after the calculation. Wojaczynski teaches wherein the gradation level of the color component with the relatively smallest gradation level remains unchanged before and after the calculation (i.e. Wojaczynski teaches the lowest levels of the gradations in the black grayscale value shifting bar as shown in the computer display control box of figure 2B, where the user is able to set such level at the same condition as before which means no change for the computer to adjust to, and while all the other color gray scale values are adjusted) (Fig. 2B, Col. 8, Line 1-38).

Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used the color customized adjustment design of Wojaczynski which ignores the lowest effecting gradation to the overall image processing system of Kuwata et al. since customized color display control allows the

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computer to display better a variety of display system such as LCD and plasma display (see Wojaczynski Col. 1, Line 60-Col. 2, Line 6).

As to claim 3, Kuwata et al. teaches the color display device as set forth in claim 1, wherein:

the variables are determined so that gradation levels of the input color images signal after color compensation fall within a range of a color model that expresses the gradation levels of the image signal before and after color compensation in terms of distributions of hue, luminance, and saturation (i.e. the system of Kuwata et al. also correct for the overall image data and allow for resolution conversion for the image data of hue and luminance since contrast and sharpness require these parameter to be calculated as well) (see Kuwata et al. [0013,0106]).

As to claims 33, 37-38, 63, and 66 see discussion of claim 1 above, claim 33, 37-38, 63, and 66 are analyzed to be broader in scope than claim 1, and are therefore rejected on the same ground.

As to claims 34, 38, 65, and 72, see discussion of claim 1 above, claim 34, 38, 65 and 72 are analyzed to differ from scope of claim 1 only in the added limitation of processing the input color image signal by carrying out a different calculation for each input color image signal depending on which of six patterns of the determined



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relationship that the input color image signal belongs to, and since Kuwata et al. teaches that there are at least eight tone levels (Fig. 6, [106-107]) there exists at least eight patterns of the determined relationship that the input color image signal belongs to, where each of the tone are processed differently according to the look up table (see [0092-0093]).

As to claims 64 and 67, see discussion of claim 3 above, claims 64 and 67 are analyzed to be broader in scope than claim 3, and are therefore rejected on the same ground.

As to claims 71 and 76, Kuwata et al. teaches a computer readable medium, comprising the program of claim 69 (i.e. the conversion system of figure 1 includes image processing 30 which is a computer executed system with program to realize the functionality of tone value correction) (see Fig. 1, [0091-0093]).

As to claims 140-149, Kuwata et al. teaches a color display panel is a color liquid crystal display panel (see Fig. 1, [0088]).

5. Claims 68 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwata et al. in view of Wojaczynski as applied in claim 1, 3, 33-34, 37-38, 63-67, 69-72, 74-76 and further in view of Yamashita et al USP 6101271.

As to claim 68, 73, Kuwata et al. teaches the method of 66, but does not explicitly teach wherein the color display method is for a television receiver. Yamashita teaches color display method is for a television receiver (i.e. NTSC format television) (see Fig. 1, Col. 4, Lines 65-67)

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to have applied television signal of Yamashita to the input of Kuwata et al. film printing system as Kuwata et al.'s system is able to process the digital images such as CG images made with computer graphics software (Kuwata et al. Col. 3, Lines 47-55) in order to expand the function of film print image correction function to television signal input (see Yamashita Col. 1, Lines 20-25).

6. Claims 134, 136 and 138 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwata et al. in view of Wojaczynski as applied in claim 1, 3, 33-34, 37-38, 63-67, 69-72, 74-76 and further in view of Smith (US Pub: 2004/0105105).

As to claims 134, 136, and 138 Kuwata et al. does not explicitly teaches the relatively greatest component in gradation level among the three components of RGB is compensated by using both the compensation value of the relatively greatest component and the compensation value of the complementary color of the relatively greatest component and the second relatively greatest component, and the second relatively greatest component in gradation level among the RGB components is

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compensated by using the compensation value of complementary color of the relatively greatest component and the second relatively greatest component. the relatively greatest component in gradation level among the three components of RGB is compensated by using both the compensation value of the relatively greatest component and the compensation value of the complementary color of the relatively greatest component and the second relatively greatest component, and the second relatively greatest component in gradation level among the RGB components is compensated by using the compensation value of complementary color of the relatively greatest component and the second relatively greatest component (i.e. the color accentuation system is able to process RGB color and determine the relative magnitude difference with in the color space and adjust base on the relative magnitude, since the example is given in Smith in CMY(K) this does not prevent one of ordinary skill in the art to applied the same technique in RGB color system).

Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used the color accentuating method of Smith to improve the printing system of Kuwata et al., in order to improve the picture quality in print media (see Smith [0005]).

### ***Response to Arguments***

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7. Applicant's arguments with respect to claims 1-3, 33-34, 37-38, 63-67, 71-72, 74-76, 132, 134, 136 and 138-149 have been considered but are moot in view of the new ground(s) of rejection.

***Allowable Subject Matter***

8. Claims 2, 60-62, and 132 are allowed.

9. Claims 21-24 and 31-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CALVIN C. MA whose telephone number is (571)270-1713. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quan-Zhen Wang can be reached on 571-272-3114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Calvin Ma  
September 24, 2010

/Quan-Zhen Wang/  
Supervisory Patent Examiner, Art Unit 2629